

IN THE CLAIMS:

1-5. (Canceled)

6. (Currently Amended) A method for predicting the onset of one or more sickle-cell anemia related pathologies in a human patient having sickle-cell anemia, said method comprising:

providing an electronic device;

measuring a concentration level of at least one breath gas exhaled by the patient over a period of time; and

comparing the said measured concentration levels with a predetermined concentration profile indicative of an onset of at least one sickle-cell pathology, wherein said step of comparing is carried out by the electronic device.

7. (Original) The method of claim 6 wherein said sickle-cell anemia pathologies include one or more pathologies from a set of pathologies including pain, anemia, stroke, or infection.

8. (Previously Presented) The method of claim 6 wherein each of said one or more selected sickle-cell anemia related pathologies are each influenced by a decreased nitric oxide (NO) bioavailability.

9. (Currently Amended) A method for predicting the onset of at least one (NO)-related negative influence in a human patient, said method comprising:

providing an electronic device;

measuring a concentration level of at least one breath gas exhaled by the patient over a period of time;

comparing the said measured concentration levels with a predetermined

concentration profile indicative of an onset of at least one selected (NO)-related negative influence; and

wherein said at least one selected (NO)-related negative influence is associated with an ivHb-dependent decrease in (NO) bioavailability, wherein said step of comparing is carried out by the electronic device.

10. (Previously Presented) The method of claim 9 wherein said (NO)-related negative influence includes (NO)-related negative influences of hemolysis in a human patient and (NO)-related negative influences of chronic hereditary hemolytic disease in a human patient.

11. (Original) The method of claim 10 wherein said one or more (NO)-related negative influences of chronic hereditary hemolytic disease include one or more pathologies from a set of pathologies including pulmonary hypertension, cutaneous ulceration, renal failure, thrombotic thrombocytopenic purpura, and malaria.

12-13. (Canceled)

14. (Currently Amended) The apparatus of claim 15 [[13]] wherein said means for comparing includes a logic circuit.

15. (Currently Amended) ~~The apparatus of claim 13 further including~~ An apparatus for predicting the onset of a medical condition in a human patient, comprising:

means for measuring a plurality of concentration levels of at least one breath gas exhaled by the patient;

means for comparing said measured concentration levels with at least one predetermined concentration profile indicative of an onset of the medical condition

wherein the medical condition is selected from a set of medical conditions including pain and the occurrence of stroke; and

a display operatively coupled to said means for comparing; wherein said means for comparing is further configured to generate a a ~~[[an]]~~ profile responsive to said measured concentration levels, said profile representative of a likelihood of onset for the said medical condition; and wherein said means for comparing is further configured to control said display to display said profile.

16-17. (Canceled)

18. (Currently Amended) The apparatus of claim 15 ~~[[13]]~~ wherein said means for measuring is configured to measure a concentration of carbon monoxide breath gas exhaled by the patient.